

Amendments to the Drawings:

The drawing sheet attached in connection with the above-identified application containing Figure 1 is being presented as a new formal drawing sheet to be substituted for the previously submitted drawing sheet. Figure 1 has been amended.

The specific changes that have been made to Figure 1 are that reference character 10 no longer designates the "START" block and the "END" blocks are no longer designated by reference character 14.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1-3, 5-8, 12, 13 and 16 are currently being amended.

This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-16 are now pending in this application.

Drawings

The drawings were objected to for failing to comply with 37 CFR 1.84(p)(4). In response, Figure 1 is amended to overcome the objection. Specifically, Figure 1 has been amended so that reference character 10 no longer designates the "START" block and the "END" blocks are no longer designated by reference character 14. Thus, Applicant respectfully requests reconsideration and that the objection be withdrawn.

Claim Objections

Claims 2 and 12 were objected to for various informalities. In response, Applicant amends claims 2 and 12 to correct minor grammatical errors. Accordingly, Applicant respectfully requests reconsideration of claims 2 and 12 and that the objection be withdrawn.

Claim Rejections under 35 U.S.C. § 112

Claims 3, 5-8 and 12 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, Applicant has amended claims 3, 5-8 and 12 to adhere to the requirements set forth in 35 U.S.C. § 112, second paragraph. Specifically, Applicant corrects the claims so that each limitation has proper antecedent basis. Accordingly, Applicant respectfully requests reconsideration of claims 3, 5-8 and 12 and that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 101

Claim 16 was rejected under 35 U.S.C. § 101 as not being drawn to statutory subject matter. In response, Applicant amends claim 16 to satisfy the requirements of 35 U.S.C. § 101 and respectfully requests that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. § 102

Claims 1-6, 8, 13 and 15-16 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,813,686 ("Black").

In response, without agreeing or acquiescing to the rejection, Applicant amends independent claims 1 and 13 to further define the invention. In addition, Applicant respectfully traverses the rejection as set forth below.

Applicant relies on M.P.E.P. § 2131, entitled "Anticipation – Application of 35 U.S.C. § 102(a), (b) and (e)" which states, " a claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Applicant respectfully submits that Black does not describe each and every element of independent claims 1 and 13 as amended.

Claim 1 is directed to a method of determining volume types present on a storage device. The claimed method includes the steps of "determining superficial specifying characteristics of a volume on the storage device and correlating the superficial specifying characteristics against one or more previously determined volume characteristics thereby inferring a method used for writing data onto the volume." Thus, for each volume present on a storage device, the present invention identifies the way in which data was written onto each volume. For example, the present invention can determine whether a volume's storage is implemented using RAID, mirrored, stripe, spanned or simple storage mechanisms.

In contrast, Black is directed to a method for assigning an enterprise logical volume identifier ("ELVID") to a logical volume used by a host in the host domain. (See Col. 22, lines 10-14.) The ELVID is a unique identifier associated with the logical object. (See Col. 22, lines 38-43.) Further, Black teaches that the ELVID is assigned to a logical entity. (See Col. 23, lines 18-20.) One purpose of the ELVID is to identify segments of data that may otherwise become 'lost' on the computer system disclosed in Black. (See Col. 24, lines 31-

33.) Further, Black discloses that the ELVID may be a substitute for a physical storage element address for logical entities. (See Col. 25, lines 19-22; Col. 27, lines 17-25.) Thus, Black discloses a method for assigning logic volumes a unique logical identifier for the purpose of routing access requests to the correct logic volumes in the event that a logic volume is moved to a different storage element. (See Col. 21, lines 63 – Col. 22, lines 1-9.)

Accordingly, Black does not disclose, teach or suggest the present invention as claimed in amended claims 1 and 13. Specifically, Black does not disclose “determining superficial specifying characteristics of a volume on the storage device.” Nor does Black disclose “correlating the superficial specifying characteristics against one or more previously determined volume characteristics thereby inferring a method used for writing data onto the volume.” In the Office Action, the Examiner asserts that the volume identifier is the superficial specifying characteristic. Applicant respectfully disagrees. First, Black discloses “assigning a logical volume identifier.” (See Col. 9, line 40.) As stated above, Black is directed to a method for assigning unique identifiers to logical volumes. In contrast, the present invention recites “determining superficial specifying characteristics of a volume” in independent claims 1 and 13. In addition, Black discloses that the logical volume identifier is unique to the logical volume. (See Col. 9, lines 41-42.) Applicant submits that a “superficial specifying characteristic” cannot be interpreted to be a unique identifier. For example, Applicant notes that several volumes on a storage device may have the superficial specifying characteristic “RAID.” In contrast, as taught in Black, each logical volume may have only one unique identifier. (See Col. 22, lines 38-43.) Thus, the volume identifier of Black is not a “superficial specifying characteristic” as claimed in claims 1 and 13.

Moreover, Black does not disclose, teach or suggest correlating the unique identifier against one or more previously determined volume characteristics as claimed in independent claims 1 and 13. Nor does Black disclose, teach or suggest inferring a method used for writing data onto the volume as claimed in independent claims 1 and 13. Accordingly, Applicant respectfully submits that independent claims 1 and 13 as amended are allowable and requests that the rejection be withdrawn. Claims 2-11, 15 and 16 depend from at least one of claims 1 or 13 and are also allowable for the reasons stated above in addition to the patentable limitation cited therein. Thus, Applicant respectfully requests reconsideration of claims 2,-11, 15 and 16 and that they be allowed.

Claim Rejections under 35 U.S.C. § 103

Claims 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Black and in further view of U.S. Patent Publication 2003/0023811. Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Black and in further view of U.S. Patent No. 6,611,896 (“Mason, Jr. et al.”). Claims 10-12 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Black and in further view of U.S. Patent No. 6,553,387 (“Cabrera et al.”).

As set forth above, claims 7-10 and 14 depend from one of amended claims 1 or 13 and are therefore allowable for at least that reason. Concerning claim 12, Applicant respectfully traverses the rejection as set forth below.

Applicant relies on M.P.E.P. § 2143, which states that to establish a prima facie case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation in the prior art to modify the reference. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all the claim limitations.

Applicant submits that Black in combination with Cabrera et al. do not teach, disclose or suggest each and every element as set forth in claim 12. As set forth above, Black discloses a method for assigning logic volumes a unique logical identifier for the purpose of routing access requests to the correct logic volumes in the event that a logic volume is moved to a different storage element. (See Col. 21, lines 63 – Col. 22, lines 1-9.)

In the Office Action, the Examiner asserts that the “symbolic name of Black’s invention is the volume identifier.” The Applicant respectfully disagrees. Black discloses that the logical volume identifier is unique to the logical volume. (See Col. 9, lines 41-42.) One purpose of the unique volume identifier is to identify segments of data that may otherwise become ‘lost’ on the computer system disclosed in Black. (See Col. 24, lines 31-33.) In contrast, as claimed in claim 12, the symbolic name may indicate whether a volume type is raid or striped. The Examiner also mentions that Black “describes some RAID types.” However, Black does not disclose, teach or suggest “identifying the volume type as either “raid” or “striped” as claimed in claim 12. Thus, Black does not disclose each and every element of the invention as claimed in claim 12. Further, Cabrera et al. fails to cure the

deficiencies of Black. Accordingly, Applicant respectfully submits that claim 12 is allowable and respectfully requests that the rejection be withdrawn.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

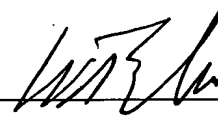
The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date

5/24/06

By



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